

II. CLAIM AMENDMENTS

Claims 1 - 18 (Cancelled)

19. (Currently amended) A method for ~~indicating~~ determining a ciphering mode of ~~data~~-communication between a mobile communication network and a mobile station in the mobile communication network, the ~~mobile communication network and~~ mobile station being capable of ~~data~~-communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the method comprising ~~the steps of~~:

- monitoring at the mobile station signals sent from the mobile communication network to the mobile station;
- in a situation ~~where~~ in which the mobile communication network is configured to use an enciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station, sending from the mobile communication network to the mobile station a cipher mode control signal, the cipher mode control signal to indicate that for setting the mobile station into an enciphered mode of communication is to be used;
- ~~monitoring at the mobile station signals sent from the mobile communication network to the mobile station;~~
- if said monitored signals comprise a cipher mode control signal, setting the mobile station into the enciphered mode of communication and indicating via to a user interface of the mobile station that the mobile communication network is configured to use an enciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station.

20. (Canceled)

21. (Currently amended) A method according to claim 19, further comprising the ~~step of~~ indicating via to a user interface of the mobile station that the mobile

communication network is configured to use an unciphered mode of
~~communication is to be used in data communication between the mobile~~
~~communication network and the mobile station~~ if said monitored signals do not
comprise a cipher mode control signal.

22. (Currently Amended) A method according to claim 19, wherein the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station is specified by an operator of the mobile communication network.
23. (Currently Amended) A method according to claim 19, ~~wherein comprising~~
determining the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station ~~is determined during~~
establishment of ~~data~~-communication between the mobile communication network and the mobile station.
24. (Currently Amended) A method according to claim 19, ~~wherein comprising~~
determining the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station ~~is determined prior to~~
establishment of ~~data~~-communication between the mobile communication network and the mobile station.
25. (Currently Amended) A method according to claim 24, ~~wherein comprising~~
~~determination~~ determining ~~of~~ the ciphering mode to be used in ~~data~~
communication between the mobile communication network and the mobile
station prior to establishment of data communication between the mobile
~~communication network and the mobile station~~ ~~is performed by means of~~
performing a location update procedure.
26. (Currently Amended) A method according to claim 19, ~~wherein comprising~~
determining the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station ~~is determined during a~~

communication handover procedure that occurs when the mobile station moves between a first part of the mobile communication network and a second part of the mobile communication network.

27. (Currently Amended) A method according to claim 19, further comprising ~~the steps of:~~
- maintaining a cipher mode indication data field in the mobile station;
 - initially setting said cipher mode indication data field into a first state indicative the mobile communication network is configured to use that an unciphered mode of communication ~~is to be used in data communication between the communication network and the mobile station;~~
 - in a situation in which said monitored signals comprise a cipher mode control signal, updating the state of the cipher mode indication data field into a second state indicative that the mobile communication network is configured to use an enciphered mode of communication ~~is to be used in data communication between the mobile communication network and the mobile station.~~
28. (Currently Amended) A method according to claim 19, ~~wherein further comprising in addition to indicating a ciphering mode,~~ wherein further comprising in addition to indicating a ciphering mode, a change in ciphering mode ~~is indicated to a user of the mobile station.~~
29. (Currently Amended) A method according to claim 19, wherein ~~data~~ communication between the mobile communication network and the mobile station takes place at least in part over a radio link.
30. (Original) A method according to claim 19, wherein the mobile communication network is a GSM network.
31. (Currently Amended) A method according to claim 19, wherein the mobile station comprises a display unit, and the method comprising indicating the ciphering mode used in ~~data~~ communication between the mobile

communication network and the mobile station ~~is indicated with~~ to a user of the mobile station using the display unit.

32. (Currently Amended) A method according to claim 19, wherein the mobile station comprises a light source ~~and the method comprising indicating the ciphering mode used in data communication between the mobile communication network and the mobile station is indicated with~~ to a user of the mobile station using the light source.
33. (Currently Amended) A method according to claim 28, wherein the mobile station comprises a display unit and an acoustic signal forming element, ~~the method comprising indicating the ciphering mode used in data communication between the mobile communication network and the mobile station is indicated with~~ to a user of the mobile station using the display unit and indicating a change in ciphering mode is indicated with to a user of the mobile station using the acoustic signal forming element.
34. (Currently Amended) A method according to claim 32, ~~wherein comprising indicating a change in ciphering mode is indicated with~~ a flashing light.
35. (Currently Amended) A method according to claim 19, ~~wherein comprising indicating a change in ciphering mode is indicated by~~ vibration.
36. (Currently Amended) A method according to claim 19, wherein the mobile station comprises a radio resource management block, a cipher indication memory block, and a user interface block, ~~the step of method comprising maintaining a cipher mode indication data field in the cipher indication memory block, monitoring signals sent from the mobile communication network to the mobile station is performed by at the radio resource management block and a cipher mode indication data field is maintained in the cipher indication memory block to determine whether said monitored signals comprise a cipher mode control signal,~~ wherein upon determining that said monitored signals comprise

- a cipher mode control signal ~~said the~~ radio resource management block sets the cipher mode indication data field in said cipher indication memory block to correspond with cipher indication data in said cipher mode control signal.
37. (Original) A method according to claim 36, wherein said cipher indication memory block makes an interrupt request in response to a change in the cipher mode indication data field.
38. (Currently Amended) A method according to claim 37, wherein the user interface block detects said interrupt request and sends an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block returns an indication of the state of ~~said the~~ cipher mode indication data field in response to said inquiry.
39. (Currently Amended) A method according to claim 38, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.
40. (Currently Amended) A method according to claim 36, wherein the cipher indication memory block provides an indication of the state of ~~said the~~ cipher mode indication data field to the user interface block when the state of ~~said the~~ cipher mode indication data field is changed.
41. (Currently Amended) A method according to claim 40, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.
42. (Original) A method according to claim 36, wherein the user interface block sends repeated inquiries to the cipher indication memory block about the state

of the cipher mode indication data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block returns an indication of the state of the cipher mode indication data field in response to each inquiry.

43. (Currently Amended) A method according to claim 42, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field.
44. (Currently Amended) A method according to claim 19, wherein ~~the mobile communication network and the mobile station are~~ is capable of a first and a second type of ~~data~~ communication, ~~each of said first and said second types of data communication having an enciphered mode and an unciphered mode, wherein the method comprising indicating~~ a ciphering mode of each of said first and second types of ~~data~~ communication ~~is indicated~~ to a user of the mobile station.
45. (Currently Amended) A method according to claim 44, wherein the first type of ~~data~~ communication is a telephone call and said second type of ~~data~~ communication is a short message (SMS).
46. (Currently Amended) A method according to claim 44, ~~wherein~~ comprising indicating the ciphering mode of the first type of ~~data~~ communication is ~~indicated~~ in a manner distinguishable from that used to indicate the ciphering mode of the second type of ~~data~~ communication.
47. (Currently Amended) A method according to claim 44, ~~wherein~~ further comprising indicating a change in ciphering mode of the first type of ~~data~~ communication ~~is indicated~~ and indicating a change in ciphering mode of the second type of ~~data~~ communication ~~is indicated~~.

48. (Currently Amended) A method according to claim 19, wherein a first mobile station and a second mobile station are in ~~data~~-communication with each other through at least one mobile communication network, ~~and the method comprising indicating the ciphering mode between the mobile communication network and the first mobile station is indicated to a user of the second mobile station.~~
49. (Currently Amended) A method according to claim 19, wherein the mobile station is used in connection with an external data processor for ~~data~~ communication between the mobile communication network and the external data processor, the external data processor comprising a display unit, ~~wherein the method comprising indicating a ciphering mode used in data communication between the mobile station and the mobile communication network is indicated on the display unit of the external data processor.~~
50. (Currently Amended) A method according to claim 49, wherein the external data processor further comprises an acoustic signal forming element, ~~and the method comprising indicating a change in ciphering mode used in data communication between the mobile station and the mobile communication network is indicated with the acoustic signal forming element of the external data processor.~~
51. (Currently Amended) A method according to claim 49, wherein the mobile station sends an indication of the state of the cipher mode indication data field ~~is provided from the mobile station to the external data processor.~~
52. (Currently Amended) A method according to claim 49, ~~wherein comprising connecting the mobile station and the external data processor are connected by means of a connection bus.~~
53. (Currently Amended) A method according to claim 49, wherein the mobile station comprises a cipher indication memory block which maintains a cipher

mode indication ~~data~~-field indicative of a ciphering mode used in data communication between the mobile communication network and the mobile station, and the external data processor is provided with application software for monitoring the ciphering mode used in ~~data~~-communication between the mobile station and the mobile communication network, wherein the application software in said external data processor sends a cipher mode inquiry message to the mobile station to determine the state of the cipher mode indication data field maintained in said cipher indication memory block of the mobile station.

54. (Original) A method according to claim 53, wherein the mobile station returns an indication of the state of said cipher mode indication data field in response to said inquiry.
55. (Currently Amended) A method according to claim 19, wherein a mobile station is in ~~data~~-communication with a terminal in a fixed line communication network, and the method further comprising indicating a ciphering mode used in communication between the fixed line communication network and the terminal in the fixed line communication network ~~is indicated~~ to a user of the mobile station.
56. (Currently Amended) A method according to claim 55, wherein the mobile station sends an inquiry message to the terminal in the fixed line communication network to determine the ciphering mode used in communication between the fixed line communication network and said terminal in the fixed line network.
57. (Currently Amended) A method according to claim 56, wherein if the mobile station does not receive a response to said inquiry message, the mobile station indicates that the ciphering mode ~~used in data communication~~ is unknown.
58. (Currently Amended) A method according to claim 56, wherein if the mobile station receives a response to said inquiry message, but cannot interpret said

response the mobile station indicates that the ciphering mode ~~used in data communication~~ is unknown.

59. (Currently amended) An apparatus for ~~indicating~~ determining a ciphering mode of ~~data~~ communication between a mobile communication network and a mobile station in the mobile communication network, the ~~mobile communication network and~~ mobile station being capable of ~~data~~ communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:

- means for monitoring signals sent from the mobile communication network to the mobile station;
- means for determining if said monitored signals comprise a cipher mode control signal, said cipher mode control signal for setting the mobile station into an enciphered mode of communication;
- means for setting the mobile station into an enciphered mode of communication; and
- means for indicating a ciphering mode ~~via to~~ a user ~~interface of the mobile station~~, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication ~~is to be used in data communication between the mobile communication network and the mobile station~~, if said monitored signals comprise a cipher mode control signal.

60. (Canceled)

61. (Currently amended) An apparatus according to claim 59, ~~further comprising~~ wherein said means for indicating a ciphering mode ~~via to~~ a user ~~interface of the mobile station~~ are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication ~~is to be used in data communication between the mobile~~

~~communication network and the mobile station~~, if said monitored signals do not comprise a cipher mode control signal.

62. (Currently Amended) An apparatus according to claim 59, wherein the apparatus is arranged operable to determine the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station during establishment of ~~data~~-communication between the mobile communication network and the mobile station.
63. (Currently Amended) An apparatus according to claim 59, wherein the apparatus is arranged operable to determine the ciphering mode to be used in ~~data~~-communication between the mobile communication network and the mobile station prior to establishment of ~~data~~-communication between the mobile communication network and the mobile station.
64. (Currently Amended) An apparatus according to claim 63, wherein the apparatus is arranged operable to determine the ciphering mode to be used in ~~data~~-communication prior to establishment of ~~data~~-communication between the mobile communication network and the mobile station by performing a location update procedure.
65. (Currently Amended) An apparatus according to claim 59, further comprising:
- means for maintaining a cipher mode indication data field;
 - means for setting said cipher mode indication data field initially into a first state indicative that the mobile communication network is configured to use an unciphered mode of communication ~~is to be used in data communication between the communication network and the mobile station~~;
 - means for changing the state of the cipher mode indication data field into a second state indicative that the mobile communication network is configured to use an enciphered mode of communication ~~is to be used in data communication between the mobile communication network and the mobile station~~, if said monitored signals comprise a cipher mode control signal.

66. (Currently amended) An apparatus according to claim 59, wherein said means for indicating a ciphering mode ~~via to a user interface of the mobile station~~ comprise a display unit.
67. (Currently amended) An apparatus according to claim 59, wherein said means for indicating a ciphering mode ~~via to a user interface of the mobile station~~ comprise a light source.
68. (Currently amended) An apparatus according to claim 59, wherein the apparatus further comprises means for indicating a change in ciphering mode ~~via to a user interface of the mobile station~~.
69. (Currently amended) An apparatus according to claim 68, wherein said means for indicating a change in ciphering mode ~~via to a user interface of the mobile station~~ comprise an acoustic signal forming element.
70. (Currently amended) An apparatus according to claim 68, wherein said means for indicating a change in ciphering mode ~~via to a user interface of the mobile station~~ comprise means for generating vibration.
71. (Canceled)
72. (Canceled)
73. (Canceled)
74. (Currently Amended) An apparatus according to claim 59, comprising a radio resource management block and a cipher indication memory block, wherein the resource management block comprises said means for monitoring signals sent from the mobile communication network to the mobile station and said means for determining if said monitored signals comprise a cipher mode control signal

~~are arranged in the radio resource management block~~ and a cipher mode indication data field is maintained in the cipher indication memory block, the radio resource management block being further ~~arranged~~ operable to set the cipher mode indication data field in said cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network.

75. (Currently Amended) An apparatus according to claim 74, wherein said cipher indication memory block is ~~arranged~~ operable to issue an interrupt request in response to a change in the cipher mode indication data field.
76. (Currently Amended) An apparatus according to claim 75, further comprising a user interface block, wherein the user interface block is ~~arranged~~ operable to detect said interrupt request and to send an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field and the cipher indication memory block is ~~arranged~~ operable to return an indication of the state of said cipher mode indication data field in response to said inquiry.
77. (Currently Amended) An apparatus according to claim 76, further comprising a cipher mode indicator, wherein the user interface block ~~being~~ is arranged operable to control the cipher mode indicator according to said indication.
78. (Currently Amended) An apparatus according to claim 74, further comprising a user interface block, wherein the cipher indication memory block is operable to provide ~~provides~~ an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed.
79. (Currently amended) An apparatus according to claim 78, further comprising a cipher mode indicator, wherein the user interface block ~~being arranged~~ is operable to control the cipher mode indicator according to said indication.

80. (Currently amended) An apparatus according to claim 74, further comprising a user interface block, wherein the user interface block is operable to send sends repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block is operable to return returns an indication of the state of the cipher mode indication data field in response to each inquiry.
81. (Currently amended) An apparatus according to claim 80, ~~wherein the mobile station comprises further comprising~~ a cipher mode indicator, ~~and wherein the~~ user interface block is operable to control controls the cipher mode indicator according to said indication.
82. (Currently amended) A mobile station comprising apparatus for ~~indicating determining~~ a ciphering mode of ~~data~~ communication between a mobile communication network and the mobile station, the ~~mobile communication network and~~ mobile station being capable of ~~data~~ communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:
- means for monitoring signals sent from the mobile communication network to the mobile station;
 - ~~_____~~ means for determining if said monitored signals comprise a cipher mode control signal, said cipher mode control signal setting the mobile station into an enciphered mode of communication;
 - means for setting the mobile station into an enciphered mode of communication; and
 - means for indicating ~~via a ciphering mode to a user interface of the mobile station, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication is to be used in data communication between the mobile communication network and~~

~~the mobile station~~, if said monitored signals comprise a cipher mode control signal.

83. (Canceled)

84. (Currently amended) A mobile station according to claim 82, ~~further comprising wherein said means for indicating via a ciphering mode to a user interface of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station~~, if said monitored signals do not comprise a cipher mode control signal.

85. (Currently amended) A mobile station comprising apparatus for ~~indicating determining~~ a ciphering mode of ~~data~~ communication between a mobile communication network and the mobile station, the ~~mobile communication network and mobile station~~ being capable of ~~data~~ communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the mobile station comprising:

- means for monitoring signals sent from the mobile communication network to the mobile station;
- means for ~~monitoring~~ determining if said monitored signals comprise a cipher mode control signal;
- means for ~~causing~~ setting the mobile station ~~to enter into~~ an enciphered mode of communication if said monitored signals comprise a cipher mode control signal;
- means for indicating a ciphering mode via to a user interface of the mobile station, comprising means for indicating ~~via said user interface~~ that the mobile communication network is configured to use an enciphered mode of communication is to be used in data communication between the mobile

~~communication network and the mobile station~~, if said monitored signals comprise a cipher mode control signal; and

- ~~means for indicating via said user interface that the mobile communication network is configured to use an unciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station~~, if said monitored signals do not comprise a cipher mode control signal.

86. (Currently amended) A mobile station according to claim 85, comprising a radio resource management block and a cipher indication memory block, wherein the radio resource management block comprises said means for monitoring signals sent from the mobile communication network to the mobile station and said means for determining if said monitored signals comprise a cipher mode control signal, ~~are arranged in the radio resource management block and a cipher mode indication data field is maintained in the cipher indication memory block, the radio resource management block being further arranged operable to set the cipher mode indication data field in said cipher indication memory block into one of a first state and a second state, said first state being indicative of that the mobile communication network is configured to use an unciphered mode of communication, to be used in data communication between the communication network and the mobile station and said second state being indicative of that the mobile communication network is configured to use an enciphered mode of communication to be used in data communication between the mobile communication network and the mobile station.~~

87. (Currently amended) A mobile station according to claim 86, wherein said cipher indication memory block is arranged operable to issue an interrupt request in response to a change in the cipher mode indication data field.

88. (Currently amended) A mobile station according to claim 87, further comprising a user interface block, wherein the user interface block is arranged operable to detect said interrupt request and to send an inquiry to the cipher indication

memory block to inquire about the state of the cipher mode indication data field, and the cipher indication memory block is ~~arranged~~operable to return an indication of the state of said cipher mode indication data field in response to said inquiry.

89. (Currently amended) A mobile station according to claim 88, wherein said user interface block is operable to control ~~controls~~ said means for indicating a ciphering mode ~~via to a user interface of the mobile station~~ in response to said indication of the state of the cipher mode indication data field.
90. (Currently amended) A mobile station according to claim 86, further comprising a user interface block, wherein the cipher indication memory block is operable to provide ~~provides~~ an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed.
91. (Currently amended) A mobile station according to claim 90, wherein said user interface block is operable to control ~~controls~~ said means for indicating a ciphering mode ~~via to a user interface of the mobile station~~ in response to said indication of the state of the cipher mode indication data field.
92. (Currently amended) A mobile station according to claim 86, further comprising a user interface block, wherein the user interface block is operable to send ~~sends~~ repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field, and the cipher indication memory block is operable to return ~~returns~~ an indication of the state of the cipher mode indication data field in response to each inquiry.
93. (Currently amended) A mobile station according to claim 92, wherein said user interface block is operable to control ~~controls~~ said means for indicating a ciphering mode ~~via to a user interface of the mobile station~~ in response to said indication of the state of the cipher mode indication data field.

94. (Currently amended) A system for ~~indicating-determining~~ a ciphering mode of ~~data~~ communication between a mobile communication network and a mobile station in the mobile communication network, the ~~mobile-communication network-and~~ mobile station being capable of ~~data~~-communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the system comprising:

- means in the mobile communication network for determining whether an enciphered mode of communication is to be used in ~~data~~-communication between the mobile communication network and the mobile station according to a setting of the mobile communication network;
- means in the mobile communication network for sending a cipher mode control signal from the mobile communication network to the mobile station in a situation where an enciphered mode of communication is to be used in ~~data~~ communication between the mobile communication network and the mobile station, said cipher mode control signal for setting the mobile station into an enciphered mode of communication;
- means in the mobile station for monitoring signals sent from the mobile communication network to the mobile station;
- means in the mobile station for determining if said monitored signals comprise a cipher mode control signal;
- means in the mobile station for setting the mobile station into an enciphered mode of communication if said monitored signals comprise a cipher mode control signal; and
- means for indicating a ciphering mode to ~~via~~ a user interface of the mobile station, said means being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station, if said monitored signals comprise a cipher mode control signal.

95. (Canceled)

96. (Currently amended) A system according to claim 94, ~~further comprising wherein said means for indicating via a ciphering mode to a user interface of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication is to be used in data communication between the mobile communication network and the mobile station,~~ if said monitored signals do not comprise a cipher mode control signal.

97. (Currently amended) An external data processor capable of use with a mobile station for ~~data communication between the external data processor and a mobile communication network via the mobile station, the mobile communication network and mobile station being capable of data communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the external data processor comprising apparatus for receiving from the mobile station, information concerning a ciphering mode used in communication between the mobile station and the mobile communication network, and means responsive to information received from the mobile station for indicating via a user interface that an enciphered mode of communication is to be used in data communication between the mobile station and the mobile communication network.~~

98. (Canceled)

99 – 121 (Canceled)

122. (New) An apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of

communication and at least one unciphered mode of communication, the apparatus comprising:

- a radio resource management block for monitoring signals sent from the mobile communication network to the mobile station and for determining if said monitored signals comprise a cipher mode control signal;
- an indicator for indicating a ciphering mode to a user of the mobile station, said indicator being operable to indicate that the mobile communication network is configured to use an enciphered mode of communication responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal.

123. (New) An apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication, the apparatus comprising:

- a radio resource management block for monitoring signals sent from the mobile communication network to the mobile station and for determining if said monitored signals comprise a cipher mode control signal;
- an indicator for indicating that the mobile communication network is configured to use an enciphered mode of communication, responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal.